

[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Office of Commercial Space Transportation

AGENCY: Federal Aviation Administration (FAA)

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: The National Aeronautics and Space Administration (NASA) acted as the lead agency, and the FAA was a cooperating agency, in the preparation of the September 2015 *Final Supplemental Environmental Assessment for the Antares 200 Configuration Expendable Launch Vehicle at Wallops Flight Facility* (SEA), which analyzes the potential environmental impacts of processing, static firing, and launch of the 200 Configuration Antares Expendable Launch Vehicle (ELV) from the NASA Goddard Space Flight Center's Wallops Flight Facility (WFF). The SEA was prepared in accordance with the National Environmental Policy Act of 1969, as amended (NEPA; 42 United States Code [U.S.C.] § 4321 et seq.); Council on Environmental Quality (CEQ) NEPA implementing regulations (40 Code of Federal Regulations [CFR] parts 1500 to 1508); NASA's regulations for implementing NEPA (14 CFR Subpart 1216.3), NASA NEPA Management Requirements (NASA Procedural Requirements 8580.1A); and FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*.

On August 29, 2009, NASA issued a FONSI for its *Final Environmental Assessment for Expansion of the Wallops Flight Facility Launch Range* (2009 EA). The FAA was a cooperating agency in the preparation of the 2009 EA and issued its own FONSI in 2010. In its FONSI, NASA identified no significant effects on the human environment associated with Alternative 1, which entailed NASA and Commonwealth of Virginia-funded construction of facilities; testing, fueling, and processing of liquid-fueled ELVs and associated spacecraft; conducting up to two ELV static test fires per year; and launching up to six liquid-fueled ELVs from the Virginia Commercial Space Flight Authority's (VCSFA) Mid Atlantic Regional Spaceport (MARS) Pad 0-A, which is located at WFF. The 2009 EA identified Orbital Sciences Corporation's (since

renamed Orbital ATK) Taurus II (since renamed Antares) as the largest liquid-fueled ELV to be processed at WFF and launched from MARS Pad 0-A.

Between 2009 and 2013, NASA and the VCSFA collectively implemented the 2009 EA's Alternative 1 by constructing a Horizontal Integration Facility (Building X-079) on Wallops Island, modifying Building V-055 on north Wallops Island to repurpose it as a spacecraft fueling facility, constructing a liquid fueling facility adjacent to Pad 0-A, and upgrading the Pad 0-A launch structure to support medium-class liquid-fueled ELVs. The sole occupant of these facilities thus far has been Orbital ATK, which was initially awarded NASA's Commercial Crew and Cargo Program Office (C3PO) Commercial Orbital Transportation Services contract in 2008 and then subsequently awarded the C3PO Commercial Resupply Services contract to provide cargo and disposal services to the International Space Station through at least 2017.

Upon final certification of the upgraded Pad 0-A and support facilities by NASA's safety organization, Orbital ATK conducted one approximately 30-second Antares static fire test in February 2013. Subsequently, between April 2013 and July 2014, Orbital ATK performed four successful launches of the Antares, three of which transported the Cygnus spacecraft to orbit from Pad 0-A. However, on October 28, 2014, Orbital ATK's fifth Antares flight, named ORB-3, suffered a catastrophic failure shortly after liftoff. In response to the ORB-3 mishap, Orbital ATK has proposed an accelerated introduction of an enhanced version of Antares that was not originally considered in the 2009 EA. Accordingly, NASA prepared the SEA, focusing specifically on the updated Antares configuration.

Based on its independent review and consideration of the SEA, the FAA concurs with the analysis of impacts and findings in the SEA and formally adopts the SEA in its entirety. After reviewing and analyzing available data and information on existing conditions and potential impacts, including the SEA, the FAA has determined that its Proposed Action of modifying Orbital ATK's launch license to conduct 200 Configuration Antares launch operations at MARS Pad 0-A would not significantly affect the quality of the human environment within the meaning of NEPA. Therefore, the preparation of an environmental impact statement is not required, and the FAA is issuing this FONSI. The FAA made this determination in accordance with applicable environmental laws and FAA regulations. The SEA is incorporated by reference into this

FONSI. If any changes to Orbital ATK's proposal fall outside the scope of the SEA, additional environmental review will be required prior to the FAA issuing license modifications.

FOR A COPY OF THE SEA: Visit the following internet address:

- http://sites.wff.nasa.gov/code250/Antares_FSEA.html
- A copy of this FONSI and the Biological Opinion issued by the Fish and Wildlife Service regarding this action may be found at:
http://www.faa.gov/about/office_org/headquarters_offices/ast/environmental/nepa_docs/review/launch/

Or contact Daniel Czelusniak, Federal Aviation Administration, 800 Independence Avenue, SW, Suite 325, Washington, DC 20591; email Daniel.Czelusniak@faa.gov; or phone (202) 267-5924.

PURPOSE AND NEED: The purpose of Orbital ATK's proposal is to restore the Antares launch capability at MARS Pad 0-A following the ORB-3 mishap in October 2014. This purpose supports Orbital ATK's overall missions for NASA under the Space Act Agreement.

The purpose of FAA's Proposed Action is to fulfill the FAA's responsibilities as authorized by Executive Order 12465, *Commercial Expendable Launch Vehicle Activities* (49 FR 7099, 3 CFR, 1984 Comp., p. 163) and the Commercial Space Launch Act (51 U.S.C. Subtitle V, ch. 509, §§ 50901-50923) for oversight of commercial space launch activities, including licensing launch activities. The need for FAA's Proposed Action results from the statutory direction from Congress under the Commercial Space Launch Act to protect the public health and safety, safety of property, and national security and foreign policy interests of the United States and to encourage, facilitate, and promote commercial space launch and reentry activities by the private sector in order to strengthen and expand U.S. space transportation infrastructure.

PROPOSED ACTION: The FAA's Proposed Action is to (1) modify Orbital ATK's existing Antares launch license to conduct launches of the 200 Configuration Antares at MARS Pad 0-A and (2) modify VCSFA's existing launch site operator license to allow 200 Configuration Antares operations. The Proposed Action analyzed in the SEA includes delivery of rocket and payload hardware and support equipment to the WFF Main Base and Island via overland transportation (existing road or rail) or via the WFF airfield; staging and processing the Antares

at the Horizontal Integration Facility (Building X-079) on Wallops Island; processing the spacecraft at the Payload Processing Facility (Building H-100) on the western portion of WFF's Main Base or a future processing facility on north Wallops Island; fueling the spacecraft at the existing fueling facility (Building V-055) on north Wallops Island or a future fueling facility on Wallops Island; and conducting two static fire tests and launching up to six ELVs and associated spacecraft annually from MARS Pad 0-A. The Proposed Action in the SEA also includes use of government-owned facilities and ground support equipment; pre- and-post launch safety analysis and oversight; and range surveillance and clearance activities on launch day.

ALTERNATIVES CONSIDERED: Alternatives analyzed in the SEA include (1) the Proposed Action (also referred to as Alternative 1 in the SEA) and (2) the No Action Alternative. Under the No Action Alternative, NASA would not allow VCSFA and Orbital ATK to process, static test fire, or launch an upgraded version of Antares from Pad 0-A. Processing and launch operations would continue with the currently configured Antares. The No Action Alternative would not meet the purpose of and need for the action.

ENVIRONMENTAL IMPACTS: The following presents a brief summary of the potential environmental impacts considered in the SEA for the Proposed Action. This FONSI incorporates the SEA by reference and is based on the potential impacts discussed in the SEA. The FAA has determined the analysis of impacts presented in the SEA represents the best available information regarding the potential impacts associated with the FAA's regulatory responsibilities described in this FONSI.

Air Quality

The primary emissions from 200 Configuration Antares launches would be carbon monoxide (CO), carbon dioxide (CO₂), and water vapor resulting from the combustion of the rocket's first stage propellants—refined petroleum-1 (RP-1) and liquid oxygen. On a per-launch basis, the 200 Configuration Antares would emit approximately 9.4 tons of CO within the mixing layer, resulting in a total of approximately 56.6 tons per year for six launches. Orbital ATK is proposing to conduct static fire testing of the first stage but for a shorter duration than originally conducted for the 100 Configuration Antares. As such, each approximately 20-second static fire

test would emit approximately 3.4 tons of CO, for a total of approximately 63.5 tons of CO emitted per year for two static fire tests and six launches.

When considering the quantities of criteria emissions emitted for both normal launch and static fire testing, 200 Configuration Antares operations would result in fewer pollutant emissions than 100 Configuration Antares operations, largely due to the shorter static fire duration for the 200 Configuration Antares. No air quality standards (e.g., National Ambient Air Quality Standards) would be exceeded. Therefore, processing, static test firing, and launch of the 200 Configuration Antares would result in less than significant impacts to air quality [SEA 3.1.4.2 at 3-11].

Biological Resources (Fish, Wildlife, and Plants)

Fish and Wildlife

Prior to launch, NASA, using helicopters and fixed-winged aircraft, conducts low-altitude surveillance of the launch area to ensure the area is clear. This surveillance would be expected to startle nearby waterbirds. However, when considered within the context of the infrequency and short duration of the overflight, coupled with the already present air traffic in the area, range surveillance activities would not significantly affect waterbirds [SEA 3.2.2.2 at 3-19].

Helicopter-based range surveillance activities could be conducted during the nesting season of bald eagles. The U.S. Fish and Wildlife Service (USFWS) National Bald Eagle Management Guidelines recommend at least a 300-meter helicopter flight buffer around active eagle nests. Consistent with these recommendations, during bald eagle nesting season, the NASA surveillance helicopter would maintain such a buffer to ensure no adverse effects on the active bald eagle nest on north Wallops Island. Therefore, helicopter surveillance flights would not significantly affect bald eagles [SEA 3.2.2.2 at 3-20].

Fixed-wing aircraft and surveillance vessels, which would provide surveillance over the open ocean, could expose seabird species to stressors induced by these activities. However, as such disturbances would be short in duration and infrequent, both surveillance flights and vessels would not significantly affect seabirds [SEA 3.2.2.2 at 3-20].

Wildlife exposed to elevated sound pressure levels from ELV launches are expected to exhibit a startle response that could interfere with normal behaviors, including breeding, feeding, and sheltering. This may include flushing birds from nests when incubating eggs, interruption of feeding or courtship, or similar responses. Because the noises associated with rocket launches are infrequent and of short duration, wildlife species are expected to return to normal behavior within a few minutes to hours following the disturbance. Due to the reproductive cycle of potentially affected species, potential disruption of breeding activities would occur between the months of April and August. However, launches from Pad 0-A would occur well south of the areas of the beach that have historically hosted the greatest level of avian nesting activity, and it is probable that avian species would continue to congregate on the more forage-rich areas of

north Wallops Island. Noise from ELV launch operations would not result in significant impacts to wildlife populations [SEA 3.2.2.2 at 3-21].

Marine Mammals

Helicopters and fixed-wing aircraft could expose marine mammals to elevated sound levels. While transmission of noise from aircraft into the water would be possible, individual marine mammals would have to be at or near the surface at the time of an overflight to be exposed to elevated sound levels. Considering the infrequent nature and short duration of helicopter flights and the high altitudes at which fixed-wing aircraft would fly during most operations, potential effects on marine mammals would be negligible [SEA Section 3.2.3.2 at 3-21].

Potential effects on marine mammals from processing, static firing, and launching the 200 Configuration Antares include direct or proximate strike (by a descending item), exposure to an ELV-generated sonic boom, and potential degradation of water quality due to onboard materials, including batteries and propellants. However, the Proposed Action is highly unlikely to expose any individual marine mammal to a stressor such that a “take” would occur. Impacts to marine mammals would be less than significant [SEA Section 3.2.3.2 at 3-22].

Threatened and Endangered Species

Per the Endangered Species Act (ESA), NASA consulted with the National Marine Fisheries Service (NMFS) and the USFWS regarding the Proposed Action and its potential effects on listed species and critical habitat. Through informal consultation with NMFS, and in response to receiving NASA’s supplemental Biological Evaluation for ELV launches from WFF, on June 18, 2015, NMFS concurred with NASA’s determination that the Proposed Action “may affect, but is not likely to adversely affect” all species and critical habitat under NMFS jurisdiction, including the North Atlantic right, blue, fin, sei, humpback, and sperm whales; 5 distinct population segments of Atlantic sturgeon; loggerhead, Kemp’s ridley, green, and leatherback sea turtles; and loggerhead sea turtle *Sargassum* critical habitat [SEA Section 3.2.4.3 at 3-30].

NASA published the final SEA prior to completing formal ESA consultation with the USFWS. On December 22, 2015, the USFWS issued its Biological Opinion (BO) for actions conducted at WFF. The BO is available on the FAA’s website (same webpage as the FONSI – see link above).

The USFWS determined that actions conducted at WFF would not jeopardize the continued existence of any federally listed species. Any USFWS-issued terms and conditions or reasonable and prudent measures applicable to Antares operations at Pad 0-A would be incorporated into future revisions of WFF's Protected Species Management Plan for implementation by NASA or its designee (e.g., VCSFA or Orbital ATK) [SEA Section 3.2.4.3 at 3-30]. Additionally, the FAA would impose the same Antares-related terms and conditions identified in the BO on VCSFA and/or Orbital ATK as part of the launch licenses. Therefore, the Proposed Action would not result in significant impacts on threatened and endangered species.

Plants

Hot rocket exhaust could result in localized scorching and spotting of vegetation. During normal operations, this foliar burning would be located in the area immediately adjacent to the Pad 0-A complex; however, in the event of a launch failure, fires could be ignited in more distant areas. The extent of any burned area during normal operations or a launch failure would be confined to southern Wallops Island and would not constitute a substantial adverse effect. In the event of a launch failure, unburned RP-1 propellant could be released onto vegetation within the Pad 0-A complex and to the adjacent wetlands, resulting in acute toxic effects on marsh vegetation. However, the extent of the release would likely be contained within the Pad 0-A complex and immediately adjacent to it. The Proposed Action would not result in significant impacts to vegetation [SEA 3.2.1.2 at 3-17].

Climate

Six 200 Configuration Antares launches would emit approximately 660 tonnes of CO₂ equivalent (CO₂e) per year. At approximately 5.8 tonnes per event, static test fires would contribute approximately 11.6 tonnes of CO₂e per year for two tests. Therefore, in total, approximately 671.5 tonnes of CO₂e would be emitted per year.

For the assessment of greenhouse gases (GHGs), 25,000 tonnes is applied as a threshold below which such emissions would be considered minor. Per recent CEQ draft guidance, this volume is not considered a significance threshold under NEPA but rather the point at which detailed GHG quantitative analysis would be warranted. The amount of GHG emissions is less than

CEQ's recommended threshold at which detailed GHG analysis for climate change is warranted. In addition, 200 Configuration Antares operations would result in fewer GHG emissions than the 100 Configuration Antares, largely due to the shorter static fire duration for the 200 Configuration Antares. Lastly, the FAA has not established a significance threshold for Climate. Therefore, processing, static test firing, and launch of the 200 Configuration Antares would result in less than significant impacts to global climate change [SEA 3.1.4.2 at 3-11].

Department of Transportation Act Section 4(f) Properties

Pre-launch preparations could require the temporary closure of vehicular access from south Wallops Island onto Assawoman Island. Such closures would temporarily suspend USFWS's ability to access Assawoman Island for biological monitoring and other refuge management activities. Launches would require temporary closure (up to 3 or 4 hours per launch attempt) of portions of the Chincoteague National Wildlife Refuge (CNWR), including southern Assateague Island and Assawoman Island. To this end, NASA has an established agreement with CNWR for such closures and coordinates with CNWR personnel during mission planning to ensure that closures do not adversely affect CNWR activities any more so than necessary to maintain public safety. The value of CNWR in terms of its significance and enjoyment is not substantially reduced or lost due to launch activities at WFF. Accordingly, the FAA has determined that 200 Configuration Antares launches would not result in a use of a Section 4(f) property. Impacts to Section 4(f) properties would be less than significant [SEA Section 3.3.3.3 at 3-34].

Hazardous Materials, Pollution Prevention, and Solid Waste

The SEA dismissed from further review the analysis of hazardous materials, pollution prevention, and solid waste because there are no proposed changes in the quantities of hazardous materials or waste from the 2009 EA. The 2009 EA determined that impacts related to hazardous materials, pollution prevention, and solid waste would be less than significant.

Historical, Architectural, Archeological, and Cultural Resources

In 2011, NASA commissioned a supplemental historic context study and comprehensive architectural survey of 76 buildings and structures with dates of construction between 1956 and 1965 on WFF. In consultation with the Virginia Department of Historic Resources (VDHR), it

was determined that there are no historic districts within WFF that are eligible for listing in the National Register of Historic Places (NRHP) and that the newly surveyed 76 buildings and structures are not individually eligible for NRHP listing.

In December 2014, a Programmatic Agreement (PA) among NASA, the Virginia State Historic Preservation Officer, and the Advisory Council on Historic Preservation, in consultation with Native American tribes, regarding the management of facilities, infrastructure, and sites at WFF, was executed. The PA set forth a streamlined process for NASA's compliance with Section 106 of the National Historic Preservation Act (NHPA), when agreed upon criteria are met and procedures in the PA are followed. Appendix G of the PA defined activities with limited potential to affect historic resources including launch/flight operations. 200 Configuration Antares launch/flight operations are considered to have limited potential for affecting cultural resources. Therefore, the Proposed Action does not require further consultation under Section 106 of the NHPA. Impacts to historical, architectural, archeological, and cultural resources would be less than significant [SEA Section 3.3.2.3 at 3-32].

Land Use (Including Farmlands and Coastal Resources)

Land Use

Processing, static firing, and launching the 200 Configuration Antares would not change land use or affect land use planning at WFF. Since completing the 2009 EA, NASA participated with Accomack County and the Navy's Surface Combat Systems Center in the Accomack County/Wallops Island Joint Land Use Study (JLUS). The primary objective of the JLUS was to identify land use issues that may impact the operational capabilities of WFF and to identify actions that participating agencies can pursue to ensure that incompatible development does not impact the facility's future mission requirements. The Proposed Action would be within the extent of (and consistent with) the hazard areas depicted in the Accomack County JLUS. Under the Proposed Action, NASA would continue to coordinate with the maritime community to ensure that its operations affect access to Chincoteague Inlet and the nearshore waterways to the least extent practicable.

Farmlands

While most of the agricultural land surrounding WFF, and part of the Main Base, is designated as prime or unique farmland based on the soil classification, no prime or unique agricultural land would be affected by the Proposed Action because the Proposed Action does not include any construction.

Coastal Resources

The Coastal Zone Management Act requires Federal agency activities to be consistent, to the maximum extent practicable, with the enforceable policies of states' federally approved coastal management programs. Although Federal lands (including NASA's Wallops Island) are excluded from Virginia's Coastal Management Area, any activity on Federal land that has reasonably foreseeable effects on coastal uses or resources must still demonstrate consistency. NASA determined that its Proposed Action is consistent to the maximum extent practicable with the enforceable policies of the Virginia Coastal Zone Management Program. In June 2015, NASA submitted its Federal Consistency Determination to the Virginia Department of Environmental Quality and received concurrence on August 20, 2015.

In summary, impacts to land use, including farmlands and coastal resources, would be less than significant [SEA Section 3.3.1.2 at 3-31; Section 3.1.3.3 at 3-8].

Light Emissions and Visual Impacts

The SEA does not specifically address light emissions and visual impacts as an impact category. The Proposed Action would result in light emissions and visual impacts, which the SEA discussed under Section 3.2.4.2, Threatened and Endangered Species [SEA Section 3.2.4.2 at 3.27]. The Configuration 200 Antares is a very similar launch vehicle to the Configuration 100 Antares analyzed in the original EA. Therefore, Configuration 200 Antares launches would not have any visual impacts substantially greater than current and past launch activities [SEA Section 2.3 at 2-2 and 2-3].

Natural Resources and Energy Supply

The SEA does not specifically address natural resources and energy supply as an impact category. However, no new utility use above that previously experienced at WFF would occur

as a result of the Proposed Action, due to the similarity of the Configuration 200 Antares launch vehicle to the Configuration 100 Antares [SEA Section 2.3 at 2-2 and 2.3]. Additionally, the type and quantity of wastewater generated at the project site would be the same as discussed in the 2009 EA. Accordingly, impacts to natural resources and energy supply would be less than significant.

Noise

The 1050.1F Desk Reference contains a list of approved models for predicting noise levels. FAA Order 1050.1F requires approval from the FAA's Office of Environment and Energy (AEE) to use a noise methodology or model that is not listed in the 1050.1F Desk Reference. Because the approved models identified in the 1050.1F Desk Reference are not suitable for predicting rocket launch noise, NASA implemented a non-standard noise methodology in the SEA to predict noise levels associated with the Proposed Action. On May 14, 2015, AEE approved NASA's methodology.

Noise modeling for the 200 Configuration Antares shows that the 115 A-weighted decibels (dBA) contour line would be approximately 1.1 kilometer away from Pad 0-A. These modeling results support the conclusion that people on the ground would not be exposed to sound pressure levels in excess of nationally accepted standards (e.g., the Occupational Safety and Health Administration 115 dBA level for a 15-minute exposure) adopted for hearing conservation.

Sound pressure levels generated by 200 Configuration Antares static fire tests would be comparatively lower than for launches due to both the constant injection of deluge water into the rocket's exhaust plume and the fact that the exhaust would be directed through the pad's flame duct to the east for the entire duration of the noise event. There are no noise sensitive areas (e.g., residences) within the 65 day-night average sound level (DNL) contour, and due to the minor increase in noise above the baseline conditions (i.e., the No Action Alternative), the Proposed Action would not result in a significant noise impact [SEA Section 3.1.5.2 at 3-16].

While aircraft-based range surveillance operations would not expose people on the ground to unsafe noise levels, they would have the potential to result in temporary annoyance. However, aircraft activity would be infrequent and of short duration. Furthermore, sounds of overflights are

frequent occurrences in the vicinity of WFF's active airfield on the Main Base. Therefore, the effects of surveillance-generated noise would not be significant [SEA Section 3.1.5.2 at 3-13].

Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety

The SEA dismissed from further review the analysis of socioeconomics, environmental justice, and children's environmental health and safety because there are no changes to the impacts identified in the 2009 EA. Impacts in the 2009 EA were determined to be less than significant.

Water Resources (Floodplains, Water Quality, Wetlands, and Wild and Scenic Rivers)

The SEA dismissed from further review the analysis of floodplains because the Proposed Action would not result in any alterations to the floodplain. There are no Wild and Scenic Rivers on or near WFF, so the Proposed Action would not result in impacts to Wild and Scenic Rivers.

Under nominal operational conditions, Pad 0-A deluge water could potentially be of low pH (due to the formation of carbonic acid) and/or contain particulate matter (due to the ablation of the launch pad or vehicle) or petroleum products (from unburned RP-1). However, all NASA monitoring has found all tested water quality parameters to be within Virginia's water quality standards.

West of the launch complex is an extensive network of emergent and scrub-shrub estuarine wetlands. Potential indirect effects resulting from launch-induced fires include elevated water temperature (a temporary phenomenon) and increases in nutrient levels and pH, which are very closely coupled with the effects of fire (e.g., increased nutrient availability) in adjacent upland areas. However, given the regular tidal influx in most of the wetland areas around the Pad 0-A complex, it is expected that nutrient levels would return to pre-fire conditions within several months.

In the event of a launch failure, it is likely that fragments of unburned solid propellant would enter nearby surface waters, potentially resulting in the release of perchlorate. However, combined with the regular tidal flux, the physical action of waves, and the dilution that would occur, it is unlikely that surface waters would contain perchlorate levels in excess of those shown to cause adverse effects on aquatic organisms. Should a launch failure occur over land,

perchlorate could also impact the shallow groundwater, especially if in direct contact with unburned solid propellant. The groundwater on Wallops Island is not a drinking water source.

Offshore in the Atlantic Ocean, the residual RP-1 propellant in the jettisoned Antares first stage would adversely affect water quality; however, when released in open water, light refined petroleum products (such as RP-1) usually spread into thin slicks and sheens and often do not persist very long; their low viscosity and high rates of loss by evaporation and dispersion into the water column tend to limit toxic effects under even low-to-moderate wave energy. As such, the Proposed Action would have less than significant impacts on water quality [SEA Section 3.1.2.2 at 3-6].

CUMULATIVE IMPACTS

This FONSI incorporates by reference the SEA, which addresses the potential impacts of past, present, and reasonably foreseeable future activities at and within the vicinity of WFF that would affect the resources impacted by the Proposed Action. For the cumulative impacts analysis, the SEA *only considered in detail those environmental impact categories that the Proposed Action would cause notably greater effects than those of the No Action Alternative, or have measurably changed since the 2009 EA.* This section presents a brief summary of cumulative impacts related to wildlife, the resource area that has most notably changed since the 2009 EA.

The Proposed Action and other projects in the vicinity have the potential to impact the wildlife on Wallops Island, particularly beach nesting and foraging birds. As a result of the Proposed Action and other projects, these species would continue to be exposed to a variety of potential stressors, of which many are frequent and recurring, including anthropogenic noise, lighting, aircraft overflight, recreational beach use, and a reduced forage base. Additionally, range surveillance activities (e.g., helicopter flights), which have been expanded since the 2009 EA, would have the potential to induce stressors upon wildlife in the area. However, compliance with project-specific avoidance and minimization measures would minimize cumulative impacts to protected species.

Furthermore, it is expected that north Wallops Island would remain largely unaffected by cumulative effect-producing actions due to its physical separation from the most active portion

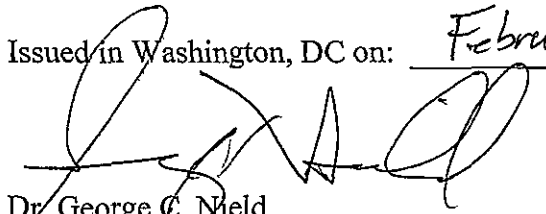
of the launch range, as well as its general exclusion from beach renourishment activities. As such, while the potential cumulative effects on terrestrial wildlife and birds would be adverse, and largely unavoidable, they would not be significant [SEA Section 3.4.2.1 at 3-36].

AGENCY FINDINGS: In accordance with applicable law, the FAA makes the following finding/determination based on the appropriate information and data contained in the SEA:

- The FAA has conducted an independent evaluation of the SEA and adopts the SEA in its entirety.
- No significant environmental impacts would be incurred as a result of the FAA's federal action.

After careful and thorough consideration of the facts contained herein, the undersigned finds that the proposed Federal action is consistent with existing national environmental policies and objectives as set forth in Section 101 of NEPA and other applicable environmental requirements and will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to Section 102(2)(c) of NEPA.

Issued in Washington, DC on: February 26, 2016



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